NOTE ON ALATE FORM OF PHYLLOSCELIS.*

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The genus Phylloscelis was established in 1839 by Germar to contain the American species atra and pallescens.

One of the generic characters of this genus has been the absence of wings. Stal using this in his key (Hemip. Africana, IV, p. 151) to separate the genus from other genera of Dictyopharida.

Partly owing to lack of knowledge of wing structure the genus has been difficult to place, and some authors have included it in the Caloscelinae because of the foliaceous anterior legs, others including it in Dictyopharinae on elytral characters, etc., notwithstanding the absence of the projecting vertex.

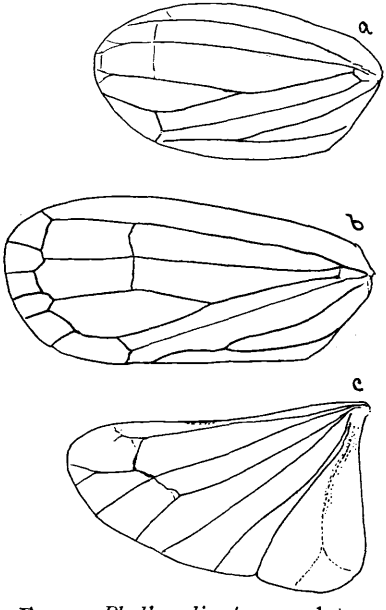

FIG. 1. *Phylloscelis atra*. *a*, elytron of apterous form; *b*, elytron of macropterous form; *c*, wing.

No one seems to have described the alate form and it was therefore with much interest that I discovered a short time ago an individual with fully developed wings in the collection of Mr. Dury, of Cincinnati. The specimen, indeed, differs so much in general appearance from the ordinary apterous individual that its relation to Phylloscelis atra was not at first suspected.

The main difference lies, however, in the larger development of the elytra and the presence of perfect wings. The elytra are elongate, oval, thick and black to apex, the venation essentially like the apterous form. The wings are nearly as long as elytra, broadly rounded, the anal area without reticulation and the venation of Dictyopharid pattern. Based on venation, therefore, it becomes possible to definitely refer the genus to the subfamily Dictyopharidae. Whether this character should have greater weight than the dilation of tibiae may be an open question. Usually, however, venational characters are counted of special value.

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Germar speaks of it as near Issus and closely related also to Eurybrachus, being distinguished by the absence of wings, the foliaceous anterior femora and the smaller five-keeled front and long six-spined tibiae. As these genera now stand in distinct subfamilies this reference is of little value in determining relationship.

The sequence of events in cases of reduction are indicated by the following: First, normal individuals have fully developed elytra and wings; next we find many species with fully developed elytra but aborted wings; next, individuals with reduced elytra and no wings, and finally forms with elytra absent or reduced to mere rudiments.

The conclusion seems evident that for species not using wings the first loss is from reduction of the wings probably since they are more delicate and susceptible to influences of disuse; next the elytra show reduction at the apex, usually by obliteration of the apical cells, the next most susceptible area, and finally by still further reduction in length.

In one remarkable genus, Danepterix, recently discovered in California, the wings are wanting and the elytra instead of being shortened have been narrowed to mere strap-like appendages, leaving a wide strip of abdomen exposed between their dorsal margins as well as at the sides.